



Bridge Condition and Needs

Joint Commission on Transportation Accountability

September 20, 2010

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Virginia Department of Transportation

Presentation Outline

- **Bridge Inventory**
- **Performance Measures**
- **Bridge Needs**
- **Funding & Allocations**

Bridge Inventory

➤ 20,877 Structures (Bridges and Large Culverts)

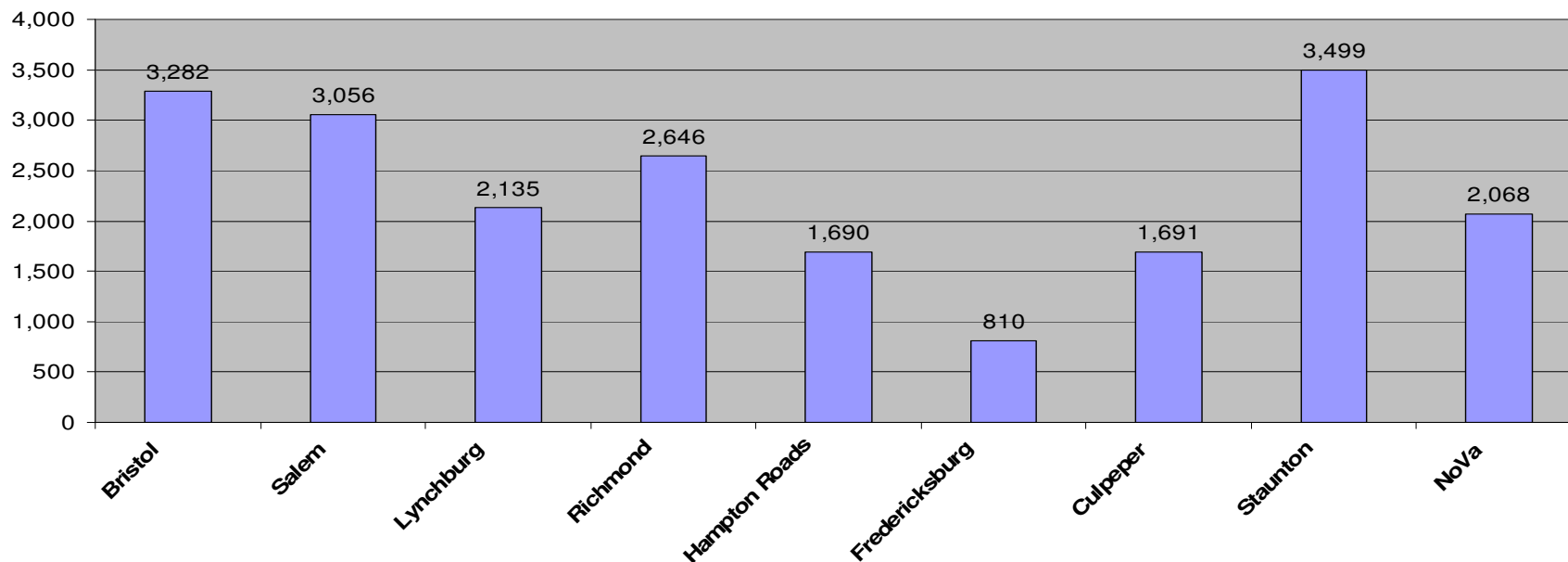
❖ 19,391 (93%) Maintained by VDOT

- ❑ 2,393 - Interstate System
- ❑ 5,178 - Primary System
- ❑ 11,776 - Secondary System
- ❑ 44 – Urban System

❖ 1,486 (7%) Maintained by Others

Bridge Inventory

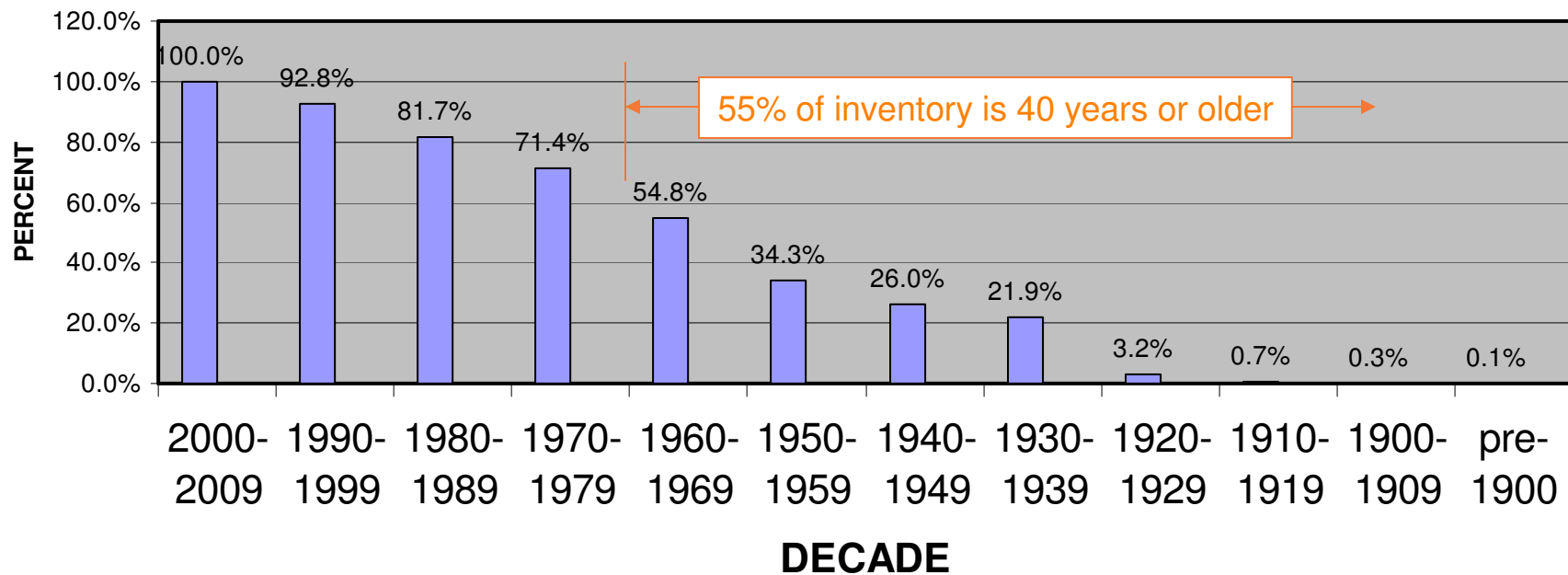
Number of Structures



District	Bristol	Salem	Lynchburg	Richmond	Hamp.Rds	F'burg	Culpeper	Staunton	NoVa	Statewide
No. of Structures	3,282	3,056	2,135	2,646	1,690	810	1,691	3,499	2,068	20,877
Percent of State	15.7%	14.6%	10.2%	12.7%	8.1%	3.9%	8.1%	16.8%	9.9%	

Bridge Inventory

CUMULATIVE PERCENT OF BRIDGES AND CULVERTS



Bridge Performance Measures

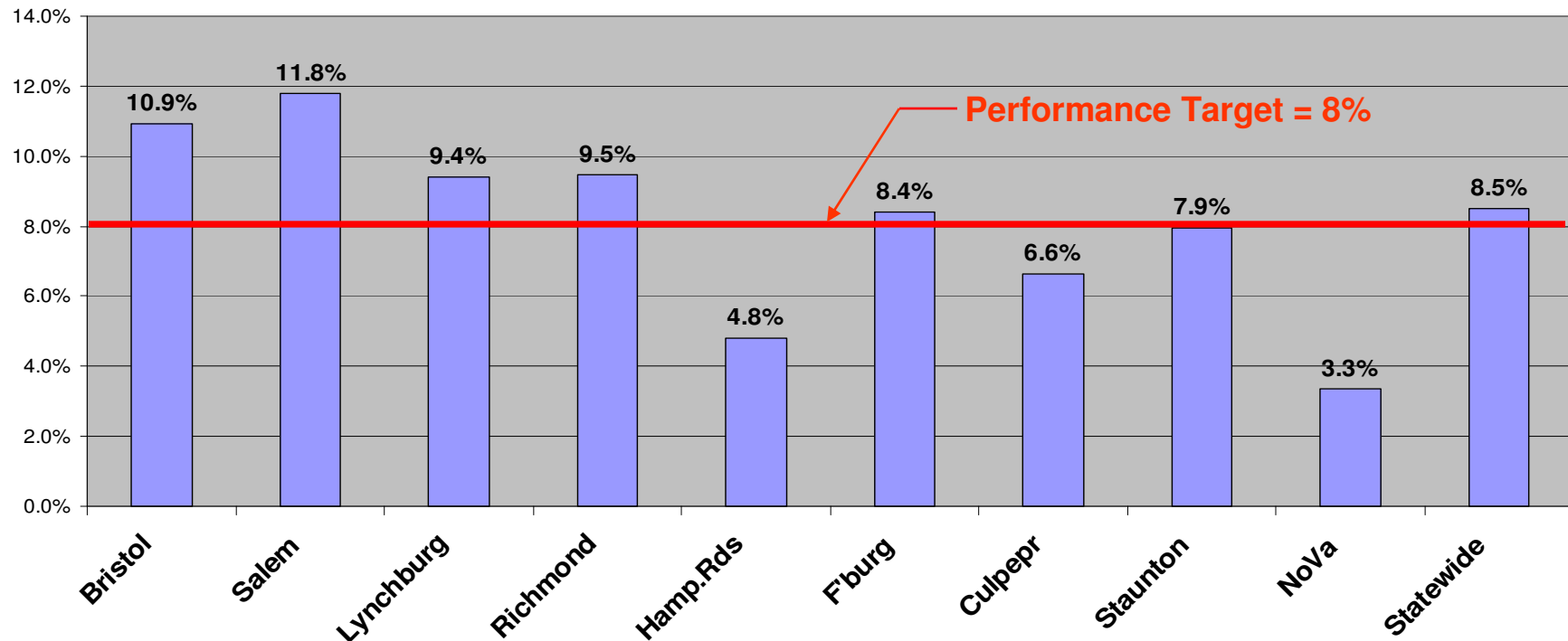
➤ **Structurally Deficient** means there are elements of the bridge that need to be monitored and/or repaired.

- ❖ An element (deck, superstructure or substructure) receives a general condition rating⁽¹⁾ of a 4 or less (poor or worse condition)
- ❖ Structural Condition or Waterway Adequacy rated a 2 or less
 - Very low load rating and bridge needs replacement
 - Frequently floods causing traffic delays

⁽¹⁾General Condition Ratings (GCR's): Is a national standard used as a guide in evaluating bridge decks, bridge superstructures, bridge substructures, and culverts. GCR is a numerical system that ranges from 0 (failed condition) to 9 (excellent condition).

Bridge Performance Measures

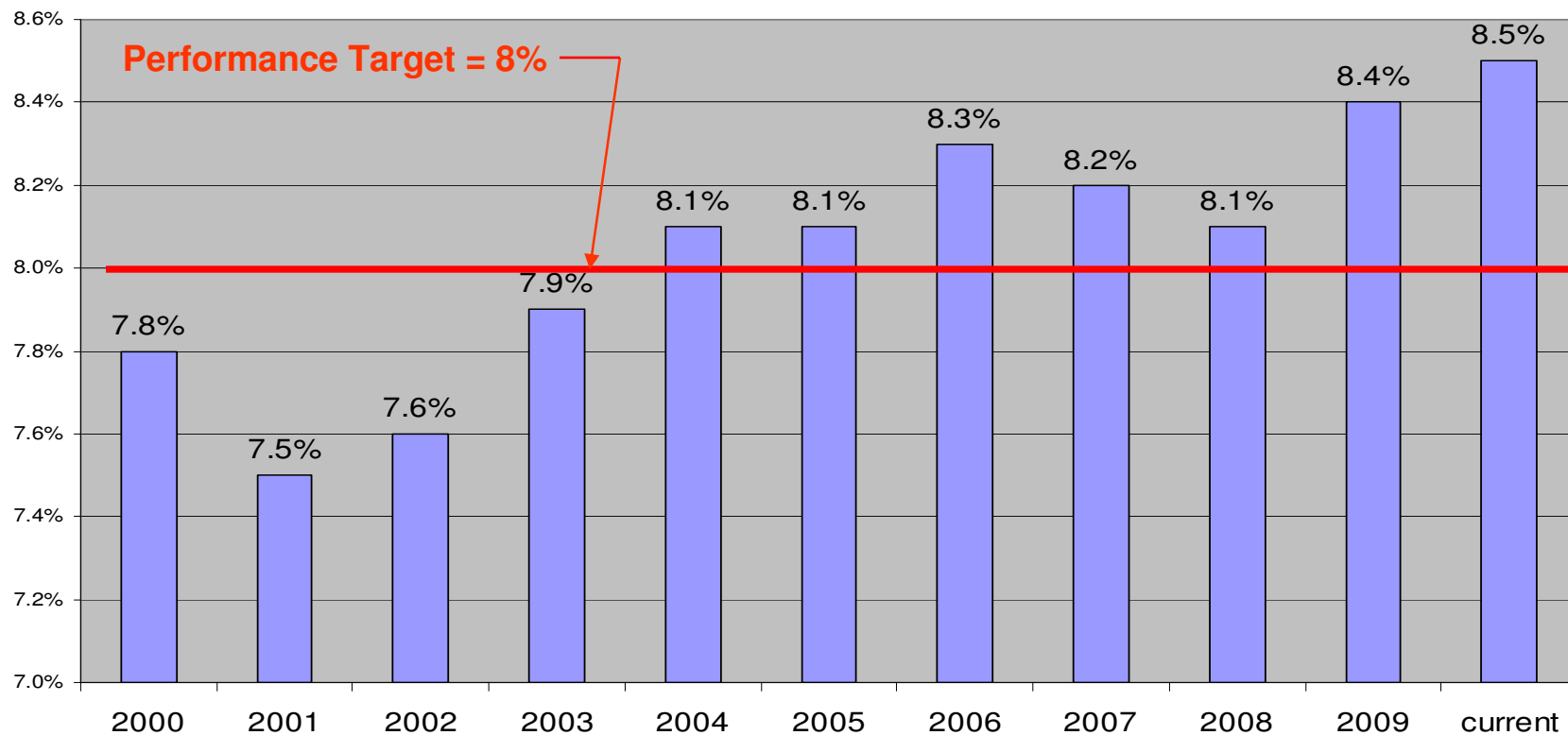
Percent of SD Structures - Systemwide



District	Bristol	Salem	Lynchburg	Richmond	Hamp.Rds	F'burg	Culpeper	Staunton	NoVa	Statewide
No. of SD Structures	358	360	201	251	81	68	112	278	69	1,778
Percent of District	10.9%	11.8%	9.4%	8.5%	4.8%	8.4%	6.6%	7.9%	3.3%	8.5%

Bridge Performance Measures

Statewide Structurally Deficient (SD) Trends



Needs Assessment

➤ Replacement needs of all SD Structures

Estimated Replacement Cost for All SD Structures				
District	No. of Structures	Existing Sq. Ft Area	New Sq. Ft Area	Total Estimate
Bristol	358	615,119	885,507	\$440,554,094
Salem	360	763,804	1,083,107	\$494,152,244
Lynchburg	201	500,769	668,410	\$328,698,637
Richmond	251	1,741,820	2,184,751	\$947,089,554
HampRds	81	1,026,536	1,162,728	\$666,461,504
F'burg	68	493,893	659,377	\$339,392,442
Culpeper	112	202,529	287,614	\$146,617,967
Staunton	278	598,199	836,132	\$454,074,268
NOVA	69	406,197	486,475	\$271,394,160
Total	1,778	6,348,866	8,254,101	\$4,088,434,870

Funding & Allocations

- **\$171 million - Bridge Maintenance Budget in FY2011**
 - ❖ \$131.1 million – Bridge Maintenance Investment
 - ❖ \$ 40.7 million – Bridge Maintenance Services

- **\$60 million – Dedicated Bridge Replacement Funds in FY2011**
 - ❖ 42.8 million On-System (BR)
 - ❖ 17.2 million Off-System (BROS)



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